

Halovelis marianarum Usinger was the only other aquatic bug noted in the general habitat. This marine veliid was often seen around and on portions of the coral pinnacles.

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THE NEARCTIC DORYCTINAE, V. THE GENUS *LELUTHIA* AND
COMMENTS ON THE STATUS OF THE TRIBE HECABOLINI
(HYMENOPTERA, BRACONIDAE)

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The Doryctinae have been divided into two tribes depending upon the presence of the second intercubitus in the forewing and, hence, three cubital cells (Doryctini), or the absence of the second intercubitus, hence, two cubital cells (Hecabolini). Tobias (1961) described a genus and species of Doryctinae which usually had two cubital cells but in which several specimens had three. After further study, and when he found no other characters to distinguish the Hecabolini and Doryctini, he concluded that "the presence or absence of the second intercubitus can not serve as a reliable criterion for the separation of these groups."

During my study of the genus *Leluthia* Cameron which normally has three cubital cells, I observed one distinct species and several specimens of another with only two cubital cells. Furthermore, one specimen has the right wing with two cells and the left with three. Otherwise, the specimens are identical and, I believe, congeneric. I agree with Tobias that this character of the forewing is not reliable

for tribal separation and that, therefore, the two tribes should be combined.

Leluthia Cameron

Leluthia Cameron, 1887, p. 392. Type-species: *Leluthia mexicana* Cameron. Desig. by Viereck, 1914.

Russellia Muesebeck, 1950, p. 78. Preocc. by Vargas, 1943. Type-species: *Heterospilus* (?) *astigma* Ashmead. Orig. desig. **New synonymy.**

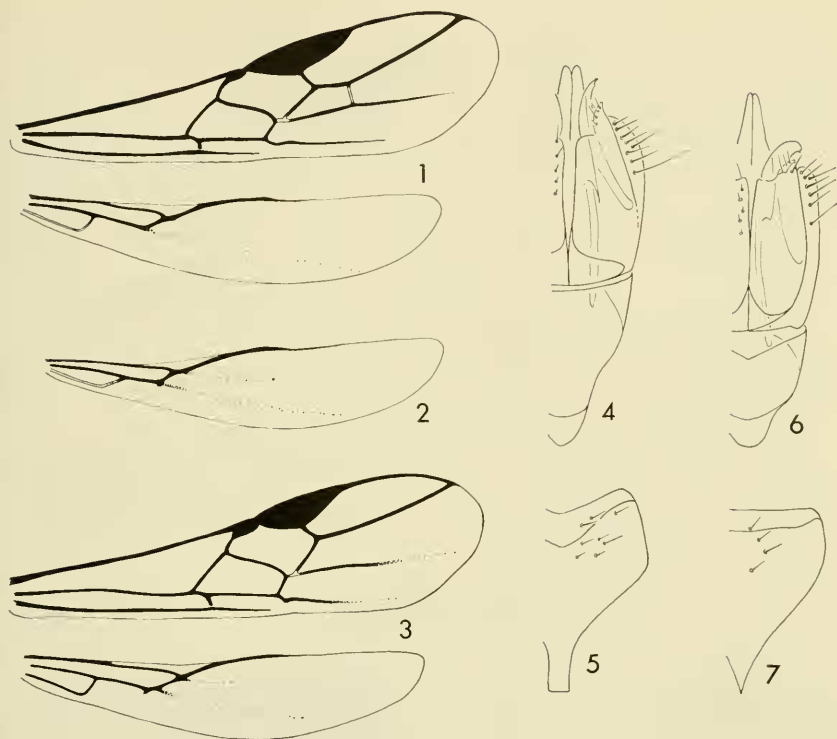
Russellella Muesebeck and Walkley, 1951, p. 178. New name for *Russellia* Muesebeck.

Distinguished by the following characters: head subcubical; first flagellar segment longer than second; forewings with two or three cubital cells, radial cell short, usually not nearly attaining apex of wing, recurrent vein entering first cubital cell, sometimes at extreme apex, subdiscoideus nearly on a straight line with discoideus, first brachial cell open at apex; foretibia with row of 5-10 small stout spines; tergum (2+3) with a transverse strongly bisinuate groove and short shallow oblique grooves from base of tergum which set off a circular or oval area medially at base of tergum (fig. 10).

Cameron (1887) included two species in *Leluthia*, *mexicana* and *fuscinervis*, the types of which are in the British Museum. Subsequently Viereck (1914) designated *mexicana* as the type-species of the genus. The other species, *fuscinervis*, is not congeneric with *mexicana* and, in fact, belongs to the genus *Heterospilus*. Muesebeck (1950) described the genus *Russellia* to include his species *prosopidis* and *astigma* Ashmead. These species are definitely congeneric with *Leluthia*, and *prosopidis* is identical with the type-species, *mexicana*.

KEY TO NEARCTIC SPECIES OF *Leluthia*

- | | |
|---|-----------------------------|
| 1. Females | 2 |
| Males | 5 |
| 2. Second intercubitus absent, forewing with two cubital cells | 3 |
| Second intercubitus present, forewing with three cells | 4 |
| 3. Ovipositor as long as abdomen; hindfemur about four times longer than its greatest width | <i>floridensis</i> , n. sp. |
| Ovipositor shorter than abdomen; hindfemur about three times longer than greatest width | <i>astigma</i> (Ashmead) |
| 4. Vertex transversely rugosopunctate; thorax stout, slightly longer than high | <i>mexicana</i> Cameron |
| Vertex punctate or granular; thorax flattened dorsoventrally, usually about twice as long as high | <i>astigma</i> (Ashmead) |
| 5. Stigma present in hindwing (fig. 8); if rarely absent, then vertex transversely rugosopunctate | <i>mexicana</i> Cameron |
| Stigma absent in hindwing; vertex punctate or granular | 6 |
| 6. Second intercubitus absent, forewing with two cubital cells; hindfemur about four times longer than its greatest width | <i>floridensis</i> , n. sp. |
| Second intercubitus present; if rarely absent, then hindfemur about three times longer than greatest width | <i>astigma</i> (Ashmead) |



Figs. 1-3. Wings of *Leluthia* species: fig. 1, *astigma*, ♀, fore and hindwing; fig. 2, *astigma*, ♂, hindwing; fig. 3, *floridensis*, ♀, fore and hindwing. Figs. 4-7. Male genitalia: fig. 4, *astigma*, genital capsule; fig. 5, *astigma*, ninth sternum; fig. 6, *floridensis*, genital capsule; fig. 7, *floridensis*, ninth sternum.

***Leluthia astigma* (Ashmead), n. comb.**
(Figs. 1, 2, 4, 5)

Heterospilus (?) *astigma* Ashmead, 1896, p. 215. Holotype male, USNM 69555.
Russellia astigma (Ashmead), Muesebeck, 1950, p. 78.
Russellella astigma (Ashmead), Muesebeck and Walkley, 1951, p. 178.

Female.—Length of body, 3-6 mm, ovipositor, 1-2 mm. Color usually entirely dark brown or black with legs lighter; often legs and basal antennal segments bright honey yellow, and body marked with reddish brown. Head cubical, flattened dorsoventrally; entirely finely granular or punctate, lower part of temples occasionally smooth; malar space one-third eye height; temples about one-half eye width; antennae 25-32 segmented. Thorax flattened dorsoventrally, often very much so; pronotum short, somewhat swollen; propleuron granular; propleural groove distinct, weakly foveolate; mesonotum not sharply declivous anteriorly; mesonotal lobes finely granular; notauli weak, rugose, obscured behind by wide rugose area; scutellar furrow with 7 cross carinae; scutellar disc granular; mesopleural disc and mesosternum granular; mesopleural furrow usually smooth;

subalar groove shallow, often rugose; propodeum coarsely granular, often longitudinally rugosopunctate medially. Hindcoxae and all femora granular; hindfemora about three times longer than greatest width. Wing venation as in fig. 1; stigma usually about four times as long as wide; second intercubitus occasionally absent. First abdominal tergum longer than wide, longitudinally rugosopunctate; tergum (2+3) with area in front of transverse groove short and broad, more often oval than circular; remainder of terga granular; ovipositor about two-thirds abdominal length.

Male.—Essentially as in female; hindwing without stigma (fig. 2); genitalia as in fig. 4, ninth sternum narrowed and truncate anteriorly (fig. 5).

Type Locality.—Morgantown, West Virginia.

Distribution.—Arizona, California, Iowa, Maryland, North Carolina, Ohio, Oklahoma, Pennsylvania, Quebec, Texas, Utah, Virginia, West Virginia, Wyoming; Mexico.

Hosts.—*Agrilus* sp., *A. difficilis* Gory, (?) *A. politus* (Say).

The specimens from Oklahoma, Texas, California, and Mexico are generally flatter and lighter than the other more northern specimens. However, I can find no significant differences and feel that they are members of this species.

Leluthia floridensis, n. sp.

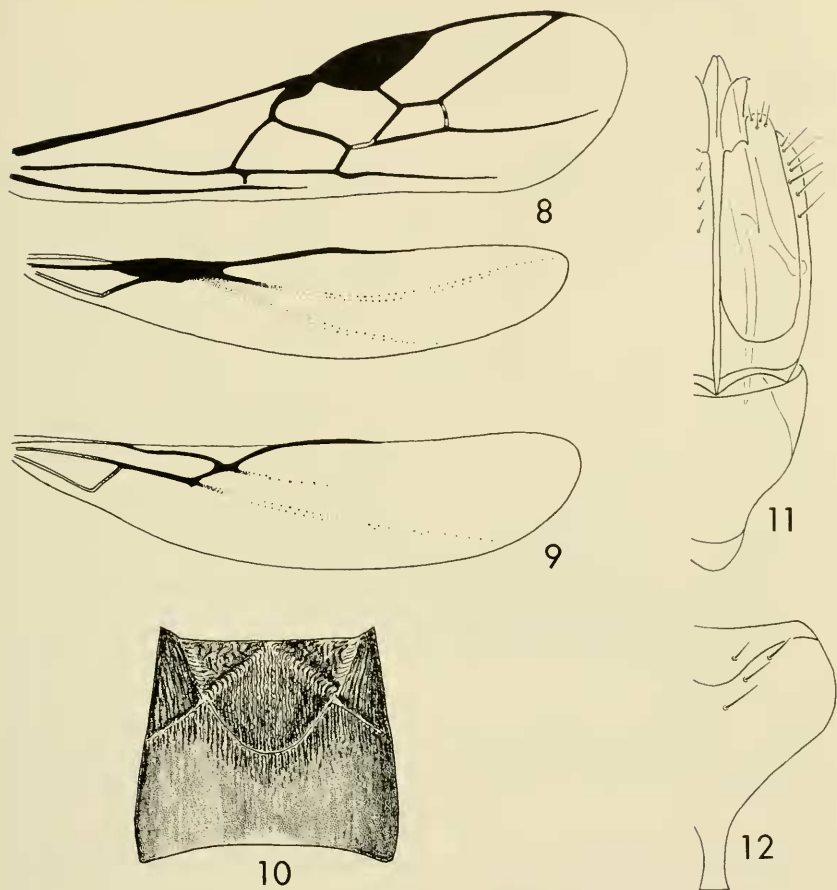
(Figs. 3, 6, 7)

Female.—Length of body, 4–5 mm, ovipositor, 2–2.5 mm. Head, thorax, and first abdominal tergum, and tergum (2+3) medially at base, dark brown, often black; legs and remainder of abdomen brown. Head flattened dorsoventrally; eyes large; malar space about one-fourth eye height; temples about one-half eye width; vertex flat, not declivous posteriorly, transversely rugulopunctate; face, temples, and frons punctate; antennae 26–29 segmented. Thorax flattened dorsoventrally; prothorax punctate; propleural groove shallow, rugulose; mesonotal lobes punctate; notauli shallow, weakly foveolate; obscured behind by wide rugose area; scutellar furrow narrow, with 7 cross carinae; scutellar disc flat, punctate; mesopleural disc and mesosternum punctate; mesopleural furrow shallow, weakly foveolate, usually as long as mesopleuron; subalar groove shallow, wide, rugose; propodeum nearly horizontal, completely longitudinally rugose. Legs punctate; hindfemora usually about four times longer than wide. Wing venation as in fig. 3; second intercubitus always absent; radial cell somewhat longer than in other species but not reaching wing tip. First abdominal tergum about as long as apical width, longitudinally rugose, without a raised median area; tergum (2+3) granular behind transverse sinuate groove; remainder of abdominal terga granular; ovipositor equal to length of abdomen.

Male.—Similar to female; length 3–4 mm; genitalia as in fig. 6; ninth sternum pointed anteriorly (fig. 7); hindwing without stigma.

Holotype female.—Florida: Polk County, August 31, 1961, ex citrus limbs. USNM 69553.

Paratypes.—Florida: Polk County, 6 ♀♀, 3 ♂♂, August 28 and September 5, 1961, ex citrus limbs; Lake Alfred, 1 ♀, August 21, 1961.



Figs. 8-12. *Leluthia mexicana*: fig. 8, fore and hindwings, ♂; fig. 9, hindwing, ♀; fig. 10, tergum (2+3); fig. 11, genital capsule, ♂; fig. 12, ninth sternum, ♂.

Host.—One specimen was reared from citrus limbs infested with the weevil *Cryptorhynchus fallax* LeConte.

This species is so similar morphologically and in general habitus to the type-species, *mexicana*, that I feel it undoubtedly belongs in *Leluthia*. The presence of only two cubital cells in the forewing would have placed this species in the tribe Hecabolini; but, in the light of the brief discussion above, this tribe has no validity. Although the male genitalia of *floridensis* are somewhat different, I do not think that this is enough to warrant a separate generic placement.

Leluthia mexicana Cameron

(Figs. 8-12)

Leluthia mexicana Cameron, 1887, p. 392. Holotype female in the British Museum. *Russellia prosopidis* Muesebeck, 1950, p. 78. Holotype female, USNM 59483.

New synonymy.

Russellella prosopidis (Muesebeck), Muesebeck and Walkley, 1951, p. 178.

Female.—Length of body, 3-6 mm, ovipositor, 1.5-3.5 mm. Color dark brown or black except lower part of head, prosternum, and legs which are often lighter brown. Head subcubical; vertex and frons transversely rugosopunctate, face rugulose, temples granular; malar space about one-third eye height; temples about three-fifths eye width; antennae 22-30 segmented. Thorax stout, not flattened; pronotum short, propleuron rugose; propleural groove not distinct; mesonotum declivous anteriorly; mesonotal lobes granular; notauli represented by wide shallow rugose lines, obscured posteriorly by wide rugose area; scutellar furrow with 7 cross carinae; scutellar disc granular; mesopleural disc punctate; mesopleural furrow deep, finely foveolate; subalar groove broad and strongly rugose; mesosternum punctate; propodeum completely rugose, no indication of carinae. Hind-coxae and all femora granular. Forewing venation as in fig. 8; hindwing, fig. 9; stigma of forewing about three times as long as wide; second segment of radius short, sometimes much shorter than first segment. First abdominal tergum about as long as broad at apex, longitudinally rugose, without raised median area; tergum (2+3) finely rugosopunctate behind transverse groove (fig. 10); remainder of terga granular; ovipositor about as long as abdomen.

Male.—Essentially as in female; length 2.5-4.5 mm; hindwing with a stigma, (fig. 8), rarely without one; genitalia as in fig. 11; ninth sternum narrowed and truncate (fig. 12).

Type Locality.—Northern Sonora, Mexico.

Distribution.—Arizona, California, New Mexico, Oklahoma, Texas; Mexico.

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